

**In the claims:**

Please amend claims 48, 59, 73, 81, 90, 97 and 99, as follows:

48.    **(Currently amended)**       The yeast cell of claim 43 wherein said yeast cell comprises an endogenous pheromone system protein, wherein said protein is not produced in functional form.
59.    **(Currently amended)**       The yeast cell of claim 58 wherein the selectable gene is an *HIS3* gene.
73.    **(Currently amended)**       The recombinant cells of claim 71, wherein the marker gene that gives rise to a detectable signal is a *HIS3* gene.
81.    **(Currently amended)**       The recombinant cells of claim 79, wherein the marker gene that gives rise to a detectable signal is a *HIS3* gene.
90.    **(Currently amended)**       The method of claim 88, wherein the marker gene that gives rise to a detectable signal is a *HIS3* gene.
97.    **(Currently amended)**       The yeast cell of claim 96, wherein the yeast cell expresses Ste3p.
99.    **(Currently amended)**       The yeast cell of claim 97, wherein the yeast cell expresses Gal1 under the control of a pheromone responsive promoter and further comprises a mutated form of Gal7 or Gal10.

Please add new claims 100-109 as follows:

- 100. **(New)** A yeast cell having a pheromone system, which cell comprises:
- (a) a first heterologous gene encoding a heterologous surrogate of a yeast pheromone receptor, said surrogate performing in the pheromone system of the yeast cell a function naturally performed by said yeast pheromone receptor, and
  - (b) a second heterologous gene encoding a heterologous peptide, wherein said heterologous peptide modulates the interaction of said surrogate with said pheromone system in the yeast cell, and said modulation is a selectable or screenable event, and wherein said heterologous polypeptide is selected from the group consisting of agonists for the surrogate receptor and antagonists of the surrogate receptor.
101. **(New)** A yeast cell having a pheromone system, which cell comprises:
- (a) a first heterologous gene encoding a heterologous surrogate of a yeast pheromone receptor, said surrogate performing in the pheromone system of the yeast cell a function naturally performed by said yeast pheromone receptor;
  - (b) a second heterologous gene encoding a heterologous peptide, wherein said heterologous peptide modulates the interaction of said surrogate with said pheromone system in the yeast cell, and said modulation is a selectable or screenable event, and wherein said heterologous polypeptide is selected from the group consisting of agonists for the surrogate receptor and antagonists of the surrogate receptor; and
  - (c) chimeric G $\alpha$  subunit, wherein the amino terminal portion of the G $\alpha$  subunit is substantially homologous with the G $\alpha$  subunit of a yeast G protein and the remainder is substantially homologous with the corresponding portion of a G $\alpha$  subunit of a heterologous G protein.
102. **(New)** A yeast cell having a pheromone system, which cell comprises:
- (a) a first heterologous gene encoding a heterologous surrogate of a yeast pheromone receptor, said surrogate performing in the pheromone system of the yeast cell a function naturally performed by said yeast pheromone receptor, and

(b) a second heterologous gene encoding a heterologous peptide, wherein said heterologous peptide modulates the interaction of said surrogate with said pheromone system in the yeast cell, and said modulation is a selectable or screenable event, and wherein (i) said heterologous polypeptide is secreted by the cell into the periplasmic space, from which it interacts with said surrogate, or (ii) is expressed in nonsecretory form.

103. **(New)** A yeast cell having a pheromone system, which cell comprises:
- (a) a first heterologous gene encoding a heterologous surrogate of a yeast pheromone receptor, said surrogate performing in the pheromone system of the yeast cell a function naturally performed by said yeast pheromone receptor, wherein said surrogate is a C5a receptor; and
  - (b) a second heterologous gene encoding a heterologous peptide, wherein said heterologous peptide modulates the interaction of said surrogate with said pheromone system in the yeast cell, and said modulation is a selectable or screenable event.
104. **(New)** A method of assaying a peptide for modulation of the activity of a non-yeast surrogate for a pheromone system protein which comprises:
- (a) providing yeast cells according to claim 43, which cells functionally express said heterologous surrogate and said heterologous peptide, and in which endogenous pleiotropic drug resistance genes have been inactivated; and
  - (b) determining by detecting a change in said selectable or screenable event whether the pheromone signal pathway is activated or inhibited by the interaction of said surrogate and said peptide, wherein the surrogate is human Mdr1, and said cells:
    - (i) comprise a pheromone-responsive selectable marker;
    - (ii) are selected for expression of a peptide having the desired activating or inhibiting effect;
    - (iii) grow on histidine-free media only if the surrogate transports  $\alpha$ -factor; and
    - (iv) are galactose-sensitive only if the surrogate transports  $\alpha$ -factor.
105. **(New)** A yeast cell having a pheromone system, which cell comprises:

(a) a first heterologous gene encoding a heterologous surrogate of a yeast pheromone receptor, said surrogate performing in the pheromone system of the yeast cell a function naturally performed by said yeast pheromone receptor, and

(b) a second heterologous gene encoding a heterologous peptide, wherein said heterologous peptide modulates the interaction of said surrogate with said pheromone system in the yeast cell, and said modulation is a selectable or screenable event; and wherein the yeast cell lacks ras function in the presence of cAMP.

106. **(New)** The yeast cell of claim 105, wherein the yeast cell comprises a cam mutation.

107. **(New)** A yeast cell having a pheromone system, which cell comprises:

(a) a first heterologous gene encoding a heterologous surrogate of a yeast pheromone receptor, said surrogate performing in the pheromone system of the yeast cell a function naturally performed by said yeast pheromone receptor, and

(b) a second heterologous gene encoding a heterologous peptide, wherein said heterologous peptide modulates the interaction of said surrogate with said pheromone system in the yeast cell, and said modulation is a selectable or screenable event; and wherein the yeast cell responds to a factor and fails to grow on galactose.

108. **(New)** A yeast cell having a pheromone system, which cell comprises:

(a) a first heterologous gene encoding a heterologous surrogate of a yeast pheromone receptor, said surrogate performing in the pheromone system of the yeast cell a function naturally performed by said yeast pheromone receptor, and

(b) a second heterologous gene encoding a heterologous peptide, wherein said heterologous peptide modulates the interaction of said surrogate with said pheromone system in the yeast cell, and said modulation is a selectable or screenable event; and wherein the yeast cell:

(i) responds to a factor;

(ii) expresses Ste3p; and

(iii) expresses Gal1 under the control of a pheromone responsive promoter and further comprises a mutated form of Gal7 or Gal10.

109. **(New)** A yeast cell having a pheromone system, which cell comprises
- (a) a first heterologous gene encoding a heterologous surrogate of a yeast pheromone receptor, said surrogate performing in the pheromone system of the yeast cell a function naturally performed by said yeast pheromone receptor, and
  - (b) a second heterologous gene encoding a heterologous peptide, wherein said heterologous peptide modulates the interaction of said surrogate with said pheromone system in the yeast cell, and said modulation is a selectable or screenable event, and wherein the heterologous peptide is 2 to 200 amino acids in length.--